

INTERNATIONAL SEARCH REPORT

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| International Application No PCT/EP2004/004707 |
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|---|---|--|--|-----------------------|--|
| A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B05D5/06 C09D5/36 C09D7/14 C09D151/00 C09D5/02 C08F2/22 C08F265/00 | | | | | |
| According to International Patent Classification (IPC) or to both national classification and IPC | | | | | |
| B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 B05D C09D C08F | | | | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched | | | | | |
| Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ | | | | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | | | | |
| Category | Citation of document, with indication, where appropriate, of the relevant passages | | | Relevant to claim No. | |
| X | EP 0 441 559 A (MITSUI TOATSU CHEMICALS) 14 August 1991 (1991-08-14) page 2, line 1 - line 8 page 14; examples 1-5; table 2 page 24; examples 28-32; table 7 page 28; examples 35-41 page 30; examples 42-45; table 10 claims 1-6,19 ----- EP 1 197 503 A (ROHM & HAAS) 17 April 2002 (2002-04-17) page 11 - page 12; tables 1.1,3.1 page 2, paragraph 1 claims 1-5 ----- -/-/ | | | 1-10,19 | |
| X' | | | | 1-10,19 | |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex. | | | | | |
| ° Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed | | | | | |
| "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family | | | | | |
| Date of the actual completion of the international search | Date of mailing of the international search report | | | | |
| 19 August 2004 | (27-10-04) | | | | |
| Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | Authorized officer Mill, S | | | | |

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| X | EP 0 451 940 A (TIOXIDE GROUP PLC) 16 October 1991 (1991-10-16) claims 1,4,7,910 page 8; example 3 ----- | 1,4 |
| A | US 5 157 084 A (LEE DO I ET AL) 20 October 1992 (1992-10-20) claims 1,2,7 ----- | 1-16,18, 19 |

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see supplemental box

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16, 18 (in part) and 19 (in part)

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

Continuation of Box III

The International Searching Authority has determined that this international application contains multiple (groups of) inventions, as follows:

1. Claims 1-16, 18 (in part) and 19 (in part)

Method for producing a core-shell polymer emulsion, obtainable by

- (i) polymerisation of monomers in at least one first stage (core monomers);
- (ii) subsequent polymerisation of monomers in at least one second stage (transition stage); and
- (iii) final polymerisation of monomers in a third stage (shell monomers);

wherein

- (a) a maximum of 30 wt.% of the monomers in the first stage correspond to those in the third stage;
- (b) of the monomers in the second stage, at least 5 wt.% correspond to those in the first stage and at least 5 wt.% correspond to those in the third stage; and
- (c) a maximum of 60 wt.% of the monomers in the second stage are in neither the first nor the third stage.

2. Claims 17, 18 (in part) and 19 (in part)

Method for producing a coloured polymer layer, characterised in that the coloured polymer system and optionally a transparent polymer layer is/are heated to temperatures above 60 °C.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/004707

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|--|--|--|
| EP 0441559 | A 14-08-1991 | JP 2790381 B2 JP 4211411 A CA 2035395 A1 DE 69116389 D1 DE 69116389 T2 EP 0441559 A2 FI 910526 A ,B, KR 9403956 B1 US 5273824 A | | 27-08-1998 03-08-1992 04-08-1991 29-02-1996 08-08-1996 14-08-1991 04-08-1991 09-05-1994 28-12-1993 |
| EP 1197503 | A 17-04-2002 | BR 0104527 A CN 1347926 A EP 1197503 A2 JP 2002194011 A US 2002072560 A1 | | 21-05-2002 08-05-2002 17-04-2002 10-07-2002 13-06-2002 |
| EP 0451940 | A 16-10-1991 | AU 636456 B2 AU 7261391 A CA 2038258 A1 DE 69115546 D1 DE 69115546 T2 DK 451940 T3 EP 0451940 A2 ES 2080888 T3 FI 911544 A ,B, GB 2242437 A ,B JP 3084080 B2 JP 4224803 A US 5229209 A ZA 9101604 A | | 29-04-1993 03-10-1991 01-10-1991 01-02-1996 02-05-1996 29-01-1996 16-10-1991 16-02-1996 01-10-1991 02-10-1991 04-09-2000 14-08-1992 20-07-1993 24-12-1991 |
| US 5157084 | A 20-10-1992 | US 5521253 A | | 28-05-1996 |